OCES 1001 – The Earth as a Blue Planet (3-credit)

Mode of Delivery – Blended Learning

This course will be delivered in the Blended Learning mode where students will view the lectures online and come to the face-to-face class to apply what they have learned online. The online lectures allow you to learn at your own pace, place and space and the face-to-face meetings allow you to discuss the concepts your learned with your peers. This requires you to work independently at home and come prepared to work collaboratively in-class.

Course website: https://canvas.ust.hk/

Course Description

The ocean is the largest life supporting habitat on Earth, and yet, it is less explored than the surface of the moon. This survey course introduces students to the fundamental, cross-disciplinary knowledge of our ocean from its formation, to the physics in circulation and climate modulation, to the chemistry and biology of the living systems within.

Intended Learning Outcomes

By the end of the course, students will be able to:

1. Describe different aspects of ocean science and identify their areas of interest from the ocean science curriculum (knowledge/ content related);
2. Recall the basics of ocean processes and their importance to the functioning of our planet (knowledge/ content related);
3. Describe the hydrology of Hong Kong and how it relates to the global ocean (knowledge/ content related, academic skills/ competencies);
4. Evaluate critically the physical, chemical and biological impacts of human activities on the ocean systems (knowledge/ content related, academic skills/ competencies)
5. Communicate relevant knowledge in oral and written formats (communication, team working).

Course Instructors & TAs

Course Coordinator: Dr. Cindy Lam (envscindy@ust.hk)

Instructors:

- Prof. Jianping GAN (magan@ust.hk)
- Prof. Stanley LAU (scklau@ust.hk)
- Prof. Hongbin LIU (liuhb@ust.hk)
- Prof. Peiyuan QIAN (boqianpy@ust.hk)
- Prof. Yan WANG (yanwang@ust.hk)
- Prof. Charmaine YUNG (ccmyung@ust.hk)
- Prof. Qinglu ZENG (zeng@ust.hk)
- Dr. Yi LAN (wylan@ust.hk)

TAs: (to be confirmed)

Grading Policy (Letter Grades)

Assessment	Percentage	Content
1. Case Studies (in-class)	35%	Complete case study worksheets through group discussions within class time
2. Online Quizzes	7%	Online quizzes via Canvas
3. Peer Rating	7%	Intra-group peer evaluation for group assignments • Case Studies The Peer Rating aims to provide a chance for students to evaluate each other's contribution in the group work. Up to 7% from this category will be deducted for free-riders.
4. Final Examination	51%	Based on online lectures (videos & powerpoints)

Case Studies (Total: 35%; 5% per case study)

Format	Details
7 case studies • Case studies (1), (2a), (2b), (3a), (3b), (4) and (5) Reading materials will be provided • Group discussion • Worksheet (group work)	7 worksheets • To be submitted at the end of the corresponding module • Each group should submit one worksheet • Absentees without prior approval will be given zero mark for the corresponding case study worksheet • Students who are late for > 10 min will be subject to a deduction of at least half of the case study group mark

Online Quizzes (x7)

There is one online quiz (10 MC questions) for each corresponding module – Quizzes (1), (2a), (2b), (3a), (3b), (4) and (5). After going through the lecture videos and Powerpoint of each module, students are encouraged to complete the quiz to check their understanding. Questions (if any) can be raised through Canvas's Discussion Room or during the face-to-face sessions.

Lecture	Instructor	TAs	Face-to-Face Session	Online Input & Quiz
1	Lau & Lam		**Course Introduction**	**Modules (1) & (2) available -lecture videos, PPTs**
2	Lam		**Ocean Research Facility Visit 1**	
3	Lam		**Ocean Research Facility Visit 2**	
4	Lam		**[Practice] Case Study Group Discussion**	
5	Wang		**Module (1): Physical Characteristics of the Ocean *(Wang)*** • Q&A • Case Study (1) – group discussion • Worksheet (1) – group work	**Quiz (1)**
6	Zeng		**Module (2a): A Glimpse of Marine Life – Diversity of Life *(Zeng)*** • Q&A • Case Study (2a) – group discussion • Worksheet (2a) – group work	**Modules 3 available -lecture videos, PPTs** **Quiz (2a)**
7	Lau		**Module (2b): A Glimpse of Marine Life – How do They Obtain Food? *(Lau)*** • Q&A • Case Study (2b) – group discussion • Worksheet (2b) – group work	**Quiz (2b)**
8	Gan		**Module (3a): The Coastal, Intertidal and Subtidal *(Gan)*** • Q&A • Case Study (3a) – group discussion • Worksheet (3a) – group work	**Modules 4 and 5 available – lecture videos and PPTs** **Quiz (3a)**
9	Liu		**Module (3b): The Coastal, Intertidal and Subtidal *(Liu)*** • Q&A • Case Study (3b) – group discussion • Worksheet (3b) – group work	**Quiz (3b)**
10	Lan		**Module (4): The Deep Sea *(Qian)*** • Q&A • Case Study (4) – group discussion • Worksheet (4) – group work	**Quiz (4)**
11	Yung		**Module (5): Humans and the Sea *(Yung)*** • Q&A • Case Study (5) – group discussion Worksheet (5) – group work	**Quiz (5)**
12	Lam		**Course Review**	