

## 2020 Marine Ecosystems (Fall)

### 海洋生態學

This lecture, Marine Ecosystems is delivered by six marine ecologists with various reserach backgrounds, Dr. Allen Chen, Dr. Benny Chan, Dr. Ryuji Machida, Dr. Yoko Nozawa, Dr. Tzu-Hao Lin, Dr. Chien-Hsiang Lin. In the lecture, we will explain Marine Ecosystems in three sections, processes, marine ecosystems, and impacts. These basic lectures will be followed by introductions of actual reserches of marine ecology by the six lecturers.

Students are expected to prepare and attend each lecture by reading textbook materials or papers given from each lecturer in advance. Depending on lecture or style of lecturer, students will be assigned additional presentation and etc. There is no examination in this lecture course, and the final grade will be given based on attendance (50%), assignment (30%), and participation (20%).

As for reading materials and assignments for each lecture, lecturers will provide or inform students at least one week before lecture. If there is any question, plase contact Dr. Yoko Nozawa ([nozaway@gate.sinica.edu.tw](mailto:nozaway@gate.sinica.edu.tw)) .

| Wednesday 14:20-17:20 |       |                  | Room 101, 1 F, Green House Building, BRCAS |  |
|-----------------------|-------|------------------|--|--|
| Date                  |       | Lecturer         | Theme                                      |  |
| week 1                | 9/16  | Ryuji Machida    | Process                                    | Primary/secondary production processes                                   |
| week 2                | 9/23  | Ryuji Machida    | Process                                    | Microbial ecology: production and the decomposition of organic materials |
| week 3                | 9/30  | Tzu-Hao Lin      | Ecosystem                                  | Estuary ecosystems   |
| week 4                | 10/7  | Benny Chan       | Ecosystem                                  | Mangrove/ Seagrass ecosystems  |
| week 5                | 10/14 | Benny Chan       | Ecosystem                                  | Intertidal ecosystem   |
| week 6                | 10/21 | Allen Chen       | Ecosystem                                  | Pelagic ecosystem  |
| week 7                | 10/28 | Yoko Nozawa      | Ecosystem                                  | Coral reef ecosystem   |
| week 8                | 11/4  | Chien-Hsiang Lin | Ecosystem                                  | Extreme (Deep sea/ Polar region) ecosystem                               |
| week 9                | 11/11 | Chien-Hsiang Lin | Impact                                     | Fishery/ Disturbance   |
| week 10               | 11/18 | Tzu-Hao Lin      | Impact                                     | Climate change and pollution   |
| week 11               | 11/25 | Yoko Nozawa      | Impact                                     | Conservation   |
| week 12               | 12/2  | Yoko Nozawa      | Expert lecture 1                           | Coral reef 1   |
| week 13               | 12/9  | Chien-Hsiang Lin | Expert lecture 2                           | Marine Conservation Paleobiology   |
| week 14               | 12/16 | Ryuji Machida    | Expert lecture 3                           | Marine metazoan metagenomics   |
| week 15               | 12/23 | Allen Chen       | Expert lecture 4                           | Coral reef 2   |
| week 16               | 12/30 | Benny Chan       | Expert lecture 5                           | Coral symbiotic barnacles and host-usage                                 |
| week 17               | 1/6   | Tzu-Hao Lin      | Expert lecture 6                           | Marine biodiversisty and underwater soundscape                           |
| week 18               | 1/13  | Allen Chen       | Taiwan marine ecosystems                   | a half day tour to the National Museum of Marine Science and Technology  |

