

LIFS3130 Marine Biology (Fall 2016-2017)

Time/ Place: Tuesday and Thursday, 15:00-16:20 in Room 1103 (classroom will be changed to LTF on Sept 8)

Intended Learning Outcome:

On successful completion of this course, students are expected to be able to:

- Describe in detail a diverse range of marine habitats and the organisms that inhabit them.
- Evaluate the extent to which a variety of environmental settings may influence marine life, taking particular account of the interaction between marine organisms and the environment.
- Evaluate the extent to which biological adaptation and ecological processes structure marine communities.
- Identify potential resources from the seas and assess their use for and by humans.
- Critically examine how marine ecological research projects are developed, implemented and interpreted.

Course Format:

There will be **Two 80-minute** sessions per week, which will include lectures, audiovisual presentations, and discussion periods.

Course Assessment (based on the following course activities and examinations)

Examinations

- Midterm Examination: **35%**
- Final Examination: **65%**

Both will be in the format of MC and essay questions.

Course Instructors:

Course Director: Prof Pei-Yuan Qian (Email: boqianpy@ust.hk, Tel: 2358 7331, Room 3422 (L17/18)

Course Instructors: Prof Hongbin Liu (Email:liuhb@ust.hk, Tel: 2358-7341, Room: 5437 (L25/26))

Prof Wen-Xiong Wang (E-mail:wwang@ust.hk, Tel: 2358-7346, Room: 5447 (L25/26))

Office hour: Tuesday and Thursday: 16:30-18:00

Textbook:

Peter Castro & Michael E. Hubber (2013) Marine Biology, The 9th Edition, McGraw-Hill Education (Asia)

Major Reference:

James W. Nybakken (2005). Marine Biology: an ecological approach. Harper Collins College publishers, New York. 6th Edition.

Jan A. Pechenik (2010). Biology of Invertebrates. 4th Edition, McGraw-Hill Book Company,

Tentative Lecture Outline and Schedule:

	Lecture Topic		Instructor
1)	1 Sept (Tue)	Introduction to Marine Environment	Wang
2)	6 Sept (Thu)	Physical and Chemical Oceanography	Qian
3)	8 Sept (Thu)	Biodiversity of Marine Life I	Qian
4)	13 Sept (Tue)	Biodiversity of Marine Life I	Qian
5)	15 Sept (Thu)	Sponges	Qian
6)	20 Sept (Tue)	Microbial diversity, function and processes	Liu
7)	22 Sept (Thu)	Biogeochemical cycles in marine ecosystems	Liu
8)	27 Sept (Tue)	Primary Producers (phytoplankton and macroalgae)	Liu
9)	29 Sept (Thu)	Primary Productivity in Ocean	Liu
10)	4 Oct (Tue)	Zooplankton and planktonic food webs	Liu
11)	6 Oct (Thu)	Mid-term exam	Liu/Qian
12)	11 Oct (Tue)	Coral Reef Ecology	Qian
13)	13 Oct (Thu)	Coral-microbe symbiosis	Qian
14)	18 Oct (Tue)	Marine molluscs	Wang
15)	20 Oct (Thu)	Marine molluscs	Wang

16)	25 Oct (Tue)	Marine arthropods	Wang
17)	27 Oct (Thu)	Marine arthropods	Wang
18)	1 Nov (Tue)	Echinoderms	Wang
19)	3 Nov (Thu)	Marine Fishes and Fisheries	Liu
20)	8 Nov (Tue)	Marine Mammals	Liu
21)	10 Nov (Thu)	Subtidal benthic communities	Liu
22)	15 Nov (Tue)	Intertidal habitats	Liu
23)	17 Nov (Thu)	Estuary and Wetland	Liu
24)	22 Nov (Tue)	Harmful Algal Blooms and Possible Mechanisms	Liu
25)	24 Nov (Thu)	Global warming, ocean acidification and hypoxia	Liu
26)	29 Nov (Tue)	Hydrothermal vent and Cold seeps	Qian
		Final Examination	Liu/Wang