



課 綱 Course Outline

環境暨海洋學院學士班

中文課程名稱 Course Name in Chinese	海洋生物多樣性概論				
英文課程名稱 Course Name in English	Introduction to Marine Biodiversity				
科目代碼 Course Code	CES_20010	班 別 Degree	學士班 Bachelor' s		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
<p>本課程透過各個領域的老師來介紹海洋生物的多樣性，使學生能從簡單的海洋生物個體的認識，進一步瞭解到更複雜的海洋生物個體的多樣性。探討主題包括生物多樣性的定義、個體的多樣性、從微生物、浮游植物、浮游動物、藻類與植物、到無脊椎動物的刺細胞動物、軟體動物、環動物節、節肢動物、棘皮動物，到脊椎動物的魚類、爬蟲類、哺乳動物及鳥類，使學生瞭解海洋生物的多樣性，並進而促發其對海洋生物進一步探索的興趣。</p>					
院教育目標 College.'s Education Objectives					
1	培養兼具國際視野與本土關懷的學生 To develop students who care about local issues and have an international perspective				
2	培養具備自然科學與社會科學知識的人才 To educate students to have knowledge of both the natural and social sciences				
3	培養具備環境倫理與人文素養的環境公民 To teach students to be environmental citizens (i.e., knowledgeable about environmental ethics and human issues.).				
院基本素養與核心能力 College Basic Learning Outcomes				課程目標與院基本素養與核心能力 Correlation between Course Objectives and Basic Learning Outcomes	
A	具備自然科學與社會科學的基礎知識 To be knowledgeable of fundamental theories in the natural and social sciences.				
B	具備觀察、理解、闡釋自然環境與人類社會互動及變遷關係的能力 To be able to observe, understand, and interpret the changing interactions of natural resources and human society.				

C	具備多元資料收集策略、閱讀論文、撰寫環境報導及創意口頭報告的能力 To have the ability to collect data, understand scientific literature, and write and present environmentally related reports.	
D	能終身學習、對環境維持熱情、關懷、並願意做出對在地環境獻身的承諾 To cultivate the values of lifelong learning, to maintain enthusiasm and concern for the environment, and to develop commitment to the local environment.	
E	具備環境倫理觀、社會責任感與社會實踐 To develop and implement environmental ethics and social responsibility.	
F	具備獨立思考、溝通協調與團隊合作的能 To think independently, to communicate effectively, and to cooperate with others as a team.	
G	具備基本外國語文能力 The be able to communicate in a foreign language.	

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱
Course Outline

課程描述：介紹和認識基礎的海洋生物的多樣性。本課程介紹海洋生物的多樣性，主題包括生物多樣性的定義與重要性、物種多樣性、群聚多樣性、棲地多樣性與生態多樣性。其中物種多樣性涵蓋微生物，海洋初級生產者的浮游植物、藻類、植物與深海熱泉生物，海洋浮游動物、海洋無脊椎動物的海綿、刺細胞動物、軟體動物、節肢動物、環節動物與棘皮動物，海洋脊椎動物的魚類、爬蟲類、哺乳動物與鳥類的介紹，這些生物的介紹也涵蓋物種間的互動、棲地的互動，及其所處的生態系的介紹，使學生能更進一步認識與瞭解海洋生物。

1. What is biodiversity
2. Biodiversity of marine microbial
3. Biodiversity of marine phytoplankton
4. Biodiversity of marine seaweeds
5. Biodiversity of marine plants
6. Biodiversity of marine zooplankton
7. Biodiversity of marine invertebrates - sponges
8. Biodiversity of marine invertebrates - cnidarians
9. Biodiversity of marine invertebrates - marine mollusc
10. Biodiversity of marine invertebrates - marine crustacean
11. Biodiversity of marine invertebrates - annelids
12. Biodiversity of marine invertebrates - echinoderm
13. Biodiversity of invertebrates - marine fishes
14. Biodiversity of invertebrates - marine reptile
15. Biodiversity of invertebrates - marine mammals

資源需求評估（師資專長之聘任、儀器設備的配合．．．等）
Resources Required (e.g. qualifications and expertise, instrument and equipment, etc.)

會依課程內容可能邀請校外老師進行教學

課程要求和教學方式之建議
Course Requirements and Suggested Teaching Methods

配合課程需要，可能會進行戶外參訪及教學

其他
Miscellaneous

課堂表現30%、期中考30%、期末考40%。

課堂教材：

Castro P, Huber ME. 2019. Marine Biology, 11 th Edition. McGraw-Hill Companies, New York, USA.

Kaiser M. J. et al. 2005. Marine Ecology: Processes, Systems, and Impacts. Oxford University Press.

Pechenik JA. 2010. Biology of the Invertebrates, 7th Edition. McGraw-Hill Companies, New York, USA.

相關研究報告。