



課 綱 Course Outline

海洋生物研究所碩士班生物多樣性及演化組

中文課程名稱 Course Name in Chinese	海洋生物多樣性及演化				
英文課程名稱 Course Name in English	Marine Biodiversity and Evolution				
科目代碼 Course Code	MBE_50100	班 別 Degree	碩士班 Master' s		
修別 Type	必修 Required	學分數 Credit(s)	2.0	時 數 Hour(s)	2.0
先修課程 Prerequisite					
課程目標 Course Objectives					
本課程介紹海洋生物的多樣性及演化，探討主題包括生物多樣性的定義、個體的多樣性探討海洋生物多樣性的基礎之事及保育觀念多樣性的時間變化、生物多樣性的調查、生物多樣性的重要、微生物的多樣性、海洋浮游植物的多樣性、海洋浮游動物的多樣性、海洋藻類與植物的多樣性、海洋無脊椎動物的多樣性、海洋脊椎動物的多樣性、全球生物多樣性、生物多樣性的演化、生物多樣性與生態系的功能、人類的影響、生物多樣性的保育等課題，並以相關研究報告進行案例討論，以使學生了解海洋生物的多樣性及演化和相關研究近況。					
系教育目標 Dept.' s Education Objectives					
1	研究具有本土特色與國際競爭優勢的海洋生物多樣性及演化課題 Studying the topics of marine biodiversity and evolution with both local and international significance.				
2	培養具備海洋生物多樣性知識與研發能力以及國際觀的專業人才 Training professionals with knowledge, research capability, and global perspective in marine biodiversity.				
系專業能力 Basic Learning Outcomes				課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.' s Education Objectives	
A	培養海洋生物多樣性及演化的認知及專業能力。 Professional knowledge and skills in marine biodiversity and evolution research.				
B	具備海洋生態保育及環境保護的概念。 Concepts of conservation of marine ecology and environment.				
C	具備獨立思考邏輯思辨及問題解決能力。 Capability of thinking independently and logically and solving problems.				

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

課程大綱
Course Outline

1. What is biodiversity
2. The diversity of organisms
3. Biodiversity through time
4. Mapping biodiversity
5. Does biodiversity matter
6. Biodiversity of the microbial world
7. Biodiversity of marine phytoplankton
8. Biodiversity of marine zooplankton
9. Biodiversity of marine seaweeds and plants
10. Biodiversity of marine invertebrates
11. Biodiversity of marine vertebrates
12. Global biodiversity: responding to change
13. The evolution of biodiversity
14. Biodiversity and ecosystem functioning
15. Human impacts
16. Maintaining biodiversity

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.)

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

課堂表現30%、期中考30%、期末考40%。

其他
Miscellaneous

課堂教材：

- Bertness MD, Gaines SD and Hay M. 2001. Marine community ecology. Sinauer Associates, MA.
- Cato JC and Brown CL. 2003. Marine ornamental species: collection, culture and conservation.
- Futuyma DJ. 2005. Evolution. Sinauer Associates, Inc. Publishers.
- Gaston KJ, Spicer JI. 2004. Biodiversity: An introduction. Blackwell Publishing.
- Groombridge B, Jenkins MD. 2002. World atlas of biodiversity. University of California Press.
- Norse EA, Crowder LB. 2005. Marine conservation biology: The science of maintaining the sea's biodiversity. Island Press.
- 相關研究報告。