



課 綱 Course Outline

海洋生物研究所博士班

中文課程名稱 Course Name in Chinese	海洋生物技術原理應用特論				
英文課程名稱 Course Name in English	Advanced Topics on Principles and Application of Marine Biotechnology				
科目代碼 Course Code	IMB_70300	班 別 Degree	博士班 Ph. D.		
修別 Type	選修 Elective	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
學生得以了解生物技術相關實驗原理與儀器操作，並進一步讓學生熟悉如何運用這些現代化生物科技的實驗技術與儀器，可深入認識海洋生物科技之基礎與應用研究，以應用於博士學位之論文研究設計。					
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	具備海洋科學基礎知識 Basic knowledge of marine science is needed.				
B	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.				
C	具備國際觀與外語專業能力 International vision and professional ability to communicate in foreign languages.				
圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated					
課程大綱 Course Outline					
1. Pure Water System and Water Quality Assessment 2. 2D Gel Electrophoresis: Workshop 3. 2D Gel Electrophoresis: Illustration of the Application for Marine Biology 4. 2D Gel Electrophoresis: On-site Practice 5. Cryogenic Equipment and Analyzer: Workshop 6. Cryogenic Equipment and Analyzer: Illustration of the Application for Marine Biology					

7. Cryogenic Equipment and Analyzer: On-site Practice 8. Fermentor and Natural Products: Workshop 9. Fermentor and Natural Products: Illustration of the Application for Marine Biology 10. Fermentor and Natural Products: On-site Practice 11. High-performance Liquid Chromatography: Workshop 12. High-performance Liquid Chromatography: Illustration of the Application for Marine Biology 13. High-performance Liquid Chromatography: On-site Practice 14. Nuclear Magnetic Resonance Spectroscopy: Workshop 15. Nuclear Magnetic Resonance Spectroscopy: Illustration of the Application for Marine Biology 16. Nuclear Magnetic Resonance Spectroscopy: On-site Practice 17. Overall Review and Discussion 18. Final Report
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.)
場地與設備：國立海洋生物博物館提供 師資：本所教師、校外相關專業教授、生物科技公司之工程師
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods
課堂講授、小組討論、實驗操作。
其他 Miscellaneous