



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	海域環境調查與實務		學年/學期 Academic Year/Semester	114/1
課程名稱(英文) Course Name in English	Sampling techniques of Marine Environmental Investigation			
科目代碼 Course Code	MBE_57880	系級 Department & Year	碩士	開課單位 Course-Offering Department 海洋生物研究所
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0	
授課教師 Instructor	/孟培傑			
先修課程 Prerequisite				
課程描述 Course Description				
<p>本課程將以臺灣不同型態海域環境為範例，針對各種海域常見之污染因子加以介紹海洋環境調查的各種樣品採集方式及現場使用之設備與儀器，使學生熟悉使用與操作方法並達成品質與品管之目標，進一步評估海洋汙染對海洋生態之影響，使學生能更進一步了解海洋汙染的威脅以及防治的重要性。</p>				
課程目標 Course Objectives				
<p>使學生熟悉海洋環境調查所使用設備與儀器之操作方法，進一步評估海洋汙染對海洋生態之影響。</p>				
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				
授課進度表 Teaching Schedule & Content				
週次 Week	內容 Subject/Topics			備註 Remarks
1	Introduction Marine environment and ecosystem			
2	Pollutants in the marine environment			

3	Nonbiodegradable Pollutants	
4	Biodegradable Pollutants, Nutrients	
5	Environmental Sampling and Analysis for Technicians-Niskin Bottle	
6	Environmental Sampling and Analysis for Technicians-CTD	
7	Environmental Sampling and Analysis for Technicians-DO & pH	
8	Environmental Sampling and Analysis for Technicians-BOD	
9	期中考試週 Midterm Exam	
10	Environmental Sampling and Analysis for Technicians-N、P、Si	
11	Environmental Sampling and Analysis for Technicians-Chl a	
12	Continuous, Real-Time Water Quality Monitoring System	
13	Internship at sea	
14	Internship at sea	
15	Internship at sea	
16	Statistics and Data Analysis	
17	Environmental Impact Assessment	
18	期末考試週 Final Exam	

教學策略 Teaching Strategies

- 課堂講授 Lecture       分組討論 Group Discussion       參觀實習 Field Trip  
 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學 (Innovative Teaching)

- 問題導向學習 (PBL)       團體合作學習 (TBL)       解決導向學習 (SBL)  
 翻轉教室 Flipped Classroom       磨課師 Moocs

社會責任 (Social Responsibility)

- 在地實踐 Community Practice       產學合作 Industry-Academia Cooperation

跨域合作 (Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching       跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

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學期成績計算及多元評量方式 Grading & Assessments

配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績(含出缺席) General Performance (Attendance Record)	20%		✓						
期中考成績 Midterm Exam	20%		✓						
期末考成績 Final Exam	20%		✓						
作業成績 Homework and/or Assignments	30%		✓						
其他 Miscellaneous (_____)	10%		✓						

評量方式補充說明

Grading & Assessments Supplemental instructions

教科書與參考書目 (書名、作者、書局、代理商、說明)

Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)

課程教材網址(含線上教學資訊, 教師個人網址請列位於本校內之網址)

Teaching Aids & Teacher's Website(Including online teaching information.  
Personal website can be listed here.)

其他補充說明 (Supplemental instructions)