



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	海洋分析化學		學年/學期 Academic Year/Semester	112/2
課程名稱(英文) Course Name in English	Marine Analytical Chemistry			
科目代碼 Course Code	MBE_57600	系級 Department & Year	碩士	開課單位 Course-Offering Department
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				
針對海洋中各種水質因子之分析技巧及其意義，以理論與實作並重之教學，使學生未來得以達到學以致用之目標				
課程目標 Course Objectives				
使學生熟悉海水的採集方式及分析方法並達成品保與品管之目標				
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	課程介紹			
2	Introduction ; Sampling techniques, Samples Preparation			
3	QA/QC : Accuracy & Precision ; Detection limits			
4	Temperature & Salinity			
5	CTD			
6	Dissolved oxygen(Winkler titration & Redox potential methods) ; Solubility saturation & Apparent oxygen utilization(AOU)			
7	Biochemical oxygen demand(BOD)			

8	Chemical oxygen demand(COD)	
9	期中考試週 Midterm Exam	
10	pH, Alkalinity & Total carbon dioxides	
11	Basic spectrophotometry	
12	Determination of nitrite-N & nitrate-N	
13	Determination of phosphate-P	
14	Determination of silicate-Si	
15	Principle of flow injection analysis (FIA) & Analysis of sulfate	
16	Potosynthetic pigments (Fluorometry & Analysis of spectrophotometry)	
17	Primary productivity	
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:

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 General Performance	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)