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②國玄東華大學

教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	海域環境調查與	上實務		學年/學期 Academic Year/Semester		112/1	
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 碩士 & Year		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

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保與品管之目標,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。

課程目標 Course Objectives

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。

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	
2	Marine environment and ecosystem	
3	Pollutants in the marine environment	
4	Nonbiodegradable Pollutants	
5	Biodegradable Pollutants, Nutrients	
6	Environmental Sampling and Analysis for Technicians-Niskin Bottle	
7	Environmental Sampling and Analysis for Technicians-CTD	
8	Environmental Sampling and Analysis for Technicians-DO & pH	
9	期中考試週 Midterm Exam	

10	Environmental Sampling and Analysis for Technicians-BOD						
11	Environmental Sampling and Analysis for Technicians-N、P、Si						
12	Environmental Sampling and Analysis for Technicians-Chl a						
13	Continuous, Real-Time Water Quality Monitoring System						
14	Internship at sea						
15	Internship at sea						
16	Statistics and Data Analysis						
17	Environmental Impact Assessment						
18	18 期末考試週 Final Exam						
	教 學 策 略 Teaching Strategies						
✓ 課堂講	授 Lecture	Field Trip					
其他Mis	scellaneous:						
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							
社會責任(Social Responsibility)							
✓ 在地實踐Community Practice ✓ 產學合作 Industy-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 othe	r:						

學期成績計算及多元評量方式 Grading & Assessments									
配分項目	配分比例 Percentage	多元評量方式 Assessments							
Items		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	25%		~	~					
期中考成績 Midterm Exam	20%	>							
期末考成績 Final Exam	30%	>							
作業成績 Homework and/or Assignments	25%		~		~				
其他 Miscellaneous	0%								

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)