



## 教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	水生生物冷凍保存		學年/學期 Academic Year/Semester	113/1
課程名稱(英文) Course Name in English	Cryopreservation of aquatic species			
科目代碼 Course Code	MBT_56820	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	/林家興			
先修課程 Prerequisite				
課程描述 Course Description				
課程之教學方式以講授為主，專題討論為輔。				
課程目標 Course Objectives				
本所為海洋生物研究所，本課程授課目標在於建立學生對於水生物種冷凍保存現況的認識，進而瞭解相關水生生物冷凍保存之應用研究。				
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	Applications of cryopreservation			
3	Cryopreservation of fresh water fish (I)			
4	Cryopreservation of fresh water fish (II)			
5	Cryopreservation of marine fish (I)			
6	Cryopreservation of marine fish (II)			
7	Ornamental fish cryopreservation			
8	Review and discussion			
9	期中考試週 Midterm Exam			
10	Invertebrate cryopreservation (I)			
11	Invertebrate cryopreservation (II)			
12	Coral cryopreservation			
13	Plankton cryopreservation			
14	Review and discussion			
15	The effect of cryopreservation on genome (I)			
16	The effect of cryopreservation on genome (II)			

17	The effect of cryopreservation on genome (III)	
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)	35%								
期中考成績 Midterm Exam	0%								
期末考成績 Final Exam	30%								
作業成績 Homework and/or Assignments	35%								
其他 Miscellaneous (_____)									

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.)

- 1) John G. Day and Glyn N. Stacey (2007) Cryopreservation and Freeze-Drying Protocols (Second Edition)
- 2) International publications

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)