

系所	環境生物與漁業科學學系	4 年級
課號 / 班別	B3104465 / A	3 學分
科目中文名稱	生物資源管理學	
科目英文名稱	Biological Resources Management	
每週授課時數	3 小時	選修
任課老師	王勝平	
開課期間	一學期	

一、教學目標 Objective	中文--- The course aims to give an introduction and analysis of world biological Resources (captive fisheries & wildlife animals, with local and international case studies English---
二、先修科目 Pre_Course	中文--- Biology & Ecology English---
三、教材內容 Outline	中文--- 1.Introduction to Biological resources and Management 2.Ecological Impact of Various Fishing Methods 3. Population unit: Stock discrimination 4. Population dynamics on Reproduction 5.Population dynamics on growth 6.Population dynamics on Death 7.Abandance estimation and stock assessment 8. Aerial survey 10.Conservation and management of whales 11.Conservation and management of seals 12.Application of remote sensing in biological resource English---
四、教學方式 Teaching Method	中文--- Three 50 minutes lecture per week plus students presentation and discussion English---
五、參考書目 Reference	中文--- Fisheries biology:Assessment and management. Michael King 1995 (SH328 K55) Fish population dynamics J.A. Gulland (1988 2nd ed) (SH32705 F57) Living Marine resources-their utilization & management. E. S. Iversen 1996 Methods for fish biology. Schreck, C. B. & P. B. Moyle (1990, ed) (QL618. 5M47) Fishes - An introduction to ichthyology peter B. Moyle and Joseph J. Cech, Jr. 2000 Quantitative Fisheries stock assessment R. Hilburn and C. J. Walters 1991 Reviews in fish biology & fisheries (QL614 R44) Beverton, Raymond J. H. and Sidney J. Holt 1957. On the dynamics of exploited fish Populations. 522p @ *Ricker, W.E. 1975. computation and interpretation of biological statistics of fish populations. 382p English---

<p>六、教學進度 Syllabi</p>	<p>中文---</p> <p>1.Introduction to Biological resources and Management Fisheries around the world, major capture fisheries, fishing grounds 2.Ecological Impact of Various Fishing Methods: A Review 3. Population unit: Stock discrimination . Methods for fish/fisheries biology . Morphological studies . Case study: redfishes 4. Population dynamics and vital statistics-Reproduction . Size and age at maturity . Reproductive cycle-Spawning season . Recruitment . Case study: cutlassfish 5.Population dynamics and vital statistics-Growth . Length-weight relationship . Growth models . Case study: cutlassfish 6.Population dynamics and vital statistics-Death . Catch curve . Natural Mortality . Fishing mortality (Harvest) . Total mortality 7.Abundance estimation and stock assessment . Recruitment model . Catch per unit effort and logistic model 8.Abundance estimation and stock assessment . dynamic pool model . Virtual population analysis and cohort analysis 9.Abundance estimation and stock assessment . FiSAT, ELEFAN, MULTIFAN . Hydroacoustic method & Aerial survey 10.Conservation and management of whales . Baleen whales . Toothed whales 11.Conservation and management of seals . Impact of seals in fisheries ecosystem . Abundance estimation . Case study: Newfoundland harp seal 12.Application of remote sensing in biological resource . Favorable algal bloom -Upwelling . Harmful algal bloom - redtide on Aquaculture 13.Students presentation on their term papers 14.Students presentation on their term papers 15.Final exam</p>
<p>七、評量方式 Evaluation</p>	<p>中文---</p> <p>Final Examination (50%; term paper 20% and oral presentations 30%)</p> <p>English---</p>
<p>八、講義位址 http://</p>	<p>建置中</p>