



課 綱 Course Outline

自然資源與環境學系學士班

中文課程名稱 Course Name in Chinese	動植物交互關係				
英文課程名稱 Course Name in English	Plant-Animal Interactions				
科目代碼 Course Code	NRES30130	班 別 Degree	學士班 Bachelor's		
修別 Type	學程 Program	學分數 Credit(s)	3.0	時 數 Hour(s)	3.0
先修課程 Prerequisite					
課程目標 Course Objectives					
本課程目的在介紹動植物間的交互關係，如草食動物對植物的影響、傳粉生物學、種子傳播的方式等；並探討這些互動關係對生物個體、族群、甚至群落的影響。					
系教育目標 Dept.'s Education Objectives					
1	培養兼具國際視野與本土關懷的學生 To develop students who care about local issues and have an international perspective				
2	培養具備自然科學與社會科學知識的人才 To educate students to have knowledge of both the natural and social sciences				
3	培養具備環境倫理與人文素養的環境公民 To teach students to be environmental citizens (i.e., knowledgeable about environmental ethics and human issues)				
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	具備自然科學與社會科學的基礎知識 To be knowledgeable of fundamental theories in the natural and social sciences.				●
B	具備觀察、理解、闡釋自然環境與人類社會互動及變遷關係的能力 To be able to observe, understand, and interpret the changing interactions of natural resources and human society.				●
C	具備多元資料收集策略、閱讀論文、撰寫環境報導及創意口頭報告的能力 To have the ability to collect data, understand scientific literature, and write and present environmentally related reports.				●

D	能終身學習、對環境維持熱情、關懷、並願意做出對在地環境獻身的承諾 To cultivate the values of lifelong learning, to maintain enthusiasm and concern for the environment, and to develop commitment to the local environment.	○
E	具備環境倫理觀、社會責任感與社會實踐力 To develop and implement environmental ethics and social responsibility.	○
F	具備獨立思考、溝通協調與團隊合作的能力 To think independently, to communicate effectively, and to cooperate with others as a team.	●
G	具備基本外國語文能力 The be able to communicate in a foreign language.	○

圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

課程大綱 Course Outline

Ecology of mutualism
Pollination syndromes
Plant breeding systems
Sexual selection in plants
Coevolution
Dispersal syndromes
Seed predation
Janzen-Connell hypothesis
Ant-plant mutualism
The hurdle of phytophagy
Negative effects of herbivores
Evolution of chemical defenses in plants
Chemical counterattack

資源需求評估(師資專長之聘任、儀器設備的配合．．．等)

Resources Required(e.g. qualifications and expertise, instrument and equipment, etc.)

課程要求和教學方式之建議

Course Requirements and Suggested Teaching Methods

本課程教學方式包括上課、討論及寫報告。老師每個星期都會指定一些文章做為輔助教材，這些文章都與上課內容有關，也是討論課時的討論主題。此外，每位同學必須交四篇的Little ditty。每次的Little Ditty都有一個主題，而這些主題都沒有標準答案，請同學們針對主題，寫一篇1-2頁的短文發表自己的看法。Little ditty是為了訓練同學們思考及表達能力而設計的，希望能讓同學們用生物學的语言把自己的想法清楚的說出來。

其他

Miscellaneous

本課程會安排一或兩次的野外調查，讓同學能實際觀察到課堂上介紹的動植物交互關係。

規劃負責老師：

單位主管：

系課程委員會審議通過日期：