



課 綱 Course Outline
海洋生物研究所碩士班生物科技組

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| 中文課程名稱 Course Name in Chinese | 進階綜合生物科學 | | | | |
| 英文課程名稱 Course Name in English | Advanced Integrative Biological Sciences | | | | |
| 科目代碼 Course Code | MBT_56730 | 班 別 Degree | 碩士班 Master' s | | |
| 修別 Type | 選修 Elective | 學分數 Credit(s) | 3.0 | 時 數 Hour(s) | 3.0 |
| 先修課程 Prerequisite | | | | | |
| 課程目標 Course Objectives | | | | | |
| <p>本課程之教學目標是讓就讀海洋生物研究所生物科技組的學生得以更加認識了解生物科學的重要學理背景，藉由多元化面向的講授課程來強化本組學生在進行研究時所需的必要背景知識，以做為探討生命科學奧妙的重要根基。期許本組學生能以學理知識為基礎，並能結合生物技術的操作與應用，訓練孕育學生具備有理論與實務兼具之能力。</p> | | | | | |
| 系教育目標 Dept.' s Education Objectives | | | | | |
| 1 | 培育海洋生命科學領域之研究人才 Nurture an international outlook of marine biotechnology research talent. | | | | |
| 2 | 培養基礎理論與應用研究兼備之人才 Cultivation of biotechnology industry specific skills and research talent. | | | | |
| 3 | 培養具國際觀之海洋生物科技研究人才 Cultivation of marine life sciences research talent. | | | | |
| 4 | 培養生物科技產業所需之技術或研究人才 Basic training in both theory and applied research talent. | | | | |
| 5 | 培養團隊合作能力之研究人才 Develop teamwork skills of research talent. | | | | |
| 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 | 具備海洋生命科學的基礎知識 Basic knowledge of marine life science is needed. | | | | |
| B | 具備獨立、創新及執行研究的能力 Independent innovation and the research ability are needed. | | | | |

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| C | 具備邏輯思考、問題分析與問題解決的能力 Logical thinking, problem analysis and problem-solving abilities are needed. | |
| D | 具備領導、溝通協調與團隊合作的能力 Good team communication, coordination and leadership skills are needed. | |
| E | 具備國際視野以及外語溝通的能力 International vision and ability to communicate in foreign languages. | |
| F | 善用資訊科技進行資訊蒐集、資料分析與統整 Use of information technology for information collection, analysis and integration. | |
| G | 對於學術倫理及專業倫理有正確的認知與堅持 For professional ethics and academic responsibility have a correct understanding and persistence. | |

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

課程大綱
Course Outline

1. Cell Biology (I)
2. Cell Biology (II)
3. Molecular Biology (I)
4. Molecular Biology (II)
5. Immunology
6. Phycology
7. Cryobiology
8. Environmental Physiology
9. Biomedical Sciences
10. Midterm Seminar
11. Proteomics
12. Transcriptomics
13. Biochemistry and Natural Products
14. Chromatography
15. Pharmacology
16. Microbial Engineering
17. Overview and Discussion
18. Final Report

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

其他
Miscellaneous