



課 綱 Course Outline
物理學系物理組

中文課程名稱 Course Name in Chinese	基礎物理實驗(四)				
英文課程名稱 Course Name in English	Experimental Physics (IV)				
科目代碼 Course Code	PHYS32000	班 別 Degree	學士班 Bachelor' s		
修別 Type	學程 Program	學分數 Credit(s)	2.0	時 數 Hour(s)	4.0
先修課程 Prerequisite					
課程目標 Course Objectives					
藉由實驗操作，學習物理基本觀念及其應用					
系教育目標 Dept.' s Education Objectives					
1	物理科學人才培育，奠定物理及相關科學領域專業知識 To provide integrated education programs in view of fundamental knowledge of physical sciences and associated fields				
2	培養高科技人才 To train the talent for knowledge-intensive industries.				
3	培養繼續進修的理工人才 To train the talent for taking higher educational program in physical sciences.				
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	具備物理之基礎背景知識 Possessing fundamental knowledge in physical sciences.			●	
B	能運用基本物理知識與邏輯推理，分析解決物理問題 Being able to analyze and solve physics problems based on basic knowledge in physics as well as logical reasoning.			●	
C	對目前測量器材有基礎認識，且具有操作物理實驗儀器的能力 Being acquainted with modern equipment and being able to operate them for performing physics experiments.			●	
D	能使用基礎電腦程式語言解決物理問題 Being able to use basic computer programming for solving physics problems			●	

E	善用各種資訊平台進行論文資料蒐集的能力 Being able to use various platforms for data collection benefiting a topical research.	○
F	具備科技發展的國際視野以及外語溝通的能力 Having an international view of the technology developments and being able to use a foreign language for communications.	○
G	能整合物理與其它領域知識 Being able to integrate the knowledge of physics with that of other fields.	●
圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated		
課程大綱 Course Outline		
1. 法蘭克-赫茲實驗 2. 光電效應實驗 3. 康卜吞效應 4. 電子繞射實驗 5. 拉塞福散射實驗 6. 電子自旋共振實驗 7. x-ray晶體繞射實驗 8. 掃描式穿隧顯微鏡		
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.)		
物理專業師資、物理實驗室、相關圖書資料、影印機、投影機、幻燈機、實驗設備		
課程要求和教學方式之建議 Course Requirements and Suggested Teaching Methods		
授課，實驗操作、問題討論，實驗報告、與期末考試。		
其他 Miscellaneous		