



課 綱 Course Outline
教育與潛能開發學系科學教育博士班

中文課程名稱 Course Name in Chinese	地球科學專題研究				
英文課程名稱 Course Name in English	Advanced Research in Earth Science				
科目代碼 Course Code	SCE_72090	班 別 Degree	博士班 Ph. D.		
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					
本課程目標在於培養中小學科學教師與科學推廣者地球科學相關知識與技能，使其具備相關態度與情操，並認識地球科學的人文意涵。					
系教育目標 Dept.'s Education Objectives					
1	培養從事科學教育學術研究的進階人才。 To cultivate advanced talents in science education study				
2	培養具備國際視野及在地關懷的科學教育專業領導者。 To cultivate professional leaders in science education with global perspective and local concern				
3	培養科學教育創新的專業領導者。 To cultivate professional leaders for science education innovation				
4	培養各級學校科學教學領航者。 To cultivate science teaching leaders of all levels of school				
5	培養大眾科學教育及科學傳播的專業人才。 To cultivate the professional talents of science communication and public science education				
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	具備科學教育專業理論發展與實踐之素養。 To possess the capacity to develop and practice theories in science education			○	

B	具備科學教育獨立研究素養。 To possess the ability of independent study focusing on science education	○
C	具備科學教育的創新與問題解決素養。 To possess creativity in science education and the ability of problem solving	○
D	具備國際學術交流之素養。 To possess the ability of international academic exchanges	○
E	具備科學教學專業素養。 To possess the ability and professional knowledge in science education	●

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

課程大綱
Course Outline

1. 地球科學簡介
2. 基礎概念介紹
3. 儀器操作與記錄
4. 資訊融入地球科學教學
5. 戶外觀測
6. 地科與人文

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.)

電腦及投影機

課程要求和教學方式之建議
Course Requirements and Suggested Teaching Methods

講述、小組討論、戶外觀測、資訊融入

其他
Miscellaneous