

## 專業能力指標與課程對應表 (地科系博士班)

105.09

備註：紫色字體為碩博合開課程 黑色字體為博士班課程

能力層面	I 知識／認知	II 職能導向	III 個人特質	IV 價值／倫理
指 標	1. 能兼具地質、地球物理、天文、大氣和海洋等地球科學各領域之基礎知識。 2. 瞭解地球科學基本內涵，具備跨領域的知能和分析與應用之能力。 3. 具備應用地球科學探究方法的基本技能，能整合地球系統、人類與環境和永續經營等相關議題。 4. 具備理性思維與邏輯判斷之能力。 5. 具備批判性思考之能力。 6. 瞭解地球科學的發展史及與其它學科的關聯與互動。	1. 具備資料統整與邏輯推演之能力。 2. 具備語文表達與溝通之能力。 3. 具備與同儕分工與團隊合作之能力。 4. 具備操作地科儀器、野外考察、探測和戶外觀測之能力。 5. 具備進修與學習專業科學新知之能力。 6. 具備電腦應用、網路學習與搜尋之能力。	1. 能以理性、科學與周延專注的態度尋求問題解答。 2. 能獨立思考與自我省思。 3. 有開闊的胸襟，不拘成見，勇於接受科技新知與理論。 4. 富同情心，具備有效溝通協調之能力。 5. 具備生涯規劃之能力、並能持續自主學習與進修。	1. 秉持誠實不造假的精神。 2. 具有堅定的科學信念與豐富的人文素養。 3. 具有抱持懷疑的求知態度。 4. 能珍惜地球資源，尊重智慧財產權。

能力指標 項目		I 知識／認知						II 職能導向						III 個人特質					IV 價值／倫理					
		I-1	I-2	I-3	I-4	I-5	I-6	II-1	II-2	II-3	II-4	II-5	II-6	III-1	III-2	III-3	III-4	III-5	IV-1	IV-2	IV-3	IV-4		
選修課程	地質學特論		●	●	●		●	●	●			●	●	●	●	●		●	●			●	●	
	大氣科學特論		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●			●	●	
	高等天文物理		●		●	●		●	●			●	●	●	●	●		●	●			●	●	
	理論地球物理學		●		●	●		●	●			●	●	●	●	●	●	●	●			●	●	
	地球系統：海洋	●	●	●	●	●	●	●	●			●	●	●	●	●	●	●	●	●	●	●	●	
進階選修課程	中尺度氣象學	●	●		●			●	●			●	●	●	●	●	●		●	●	●	●		
	區域地質學		●	●	●	●		●	●		●	●	●	●	●	●		●	●			●	●	
	認知與教學				●	●	●	●	●	●		●	●	●	●	●	●		●		●	●		
	高等天文觀測	●	●		●	●		●	●	●	●	●	●	●	●	●		●	●			●	●	
	星際介質	●	●		●	●		●				●	●	●	●	●			●	●			●	●
	海洋數值模式	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	
	氣候研究統計分析方法		●		●	●		●	●			●	●	●	●	●	●	●	●			●	●	
	東亞氣候特論		●	●	●	●		●	●	●		●	●	●	●	●		●	●			●	●	
	岩理學方法	●	●		●			●	●		●	●		●	●			●	●				●	
	震測地層學	●			●			●			●	●		●	●	●			●	●			●	
	震測地層學實習	●			●			●			●	●	●	●	●	●			●	●				●
	海洋衛星資料分析(一)	●	●	●	●	●		●	●	●	●	●	●	●	●	●			●	●	●	●	●	●

選修課程	能力指標																							
	I 知識／認知						II 職能導向						III 個人特質					IV 價值／倫理						
	I-1	I-2	I-3	I-4	I-5	I-6	II-1	II-2	II-3	II-4	II-5	II-6	III-1	III-2	III-3	III-4	III-5	IV-1	IV-2	IV-3	IV-4			
工程地球物理學		●	●	●			●	●		●	●		●	●	●			●				●		
重磁學		●		●			●			●	●		●	●	●			●				●		
重磁學實習		●		●			●			●	●		●	●	●		●	●				●		
高等天氣學		●		●	●		●	●	●		●	●	●	●	●	●		●	●			●		
地震地磁學(一)	●	●		●			●	●			●		●	●				●			●	●		
地震地磁學(二)	●	●		●			●	●			●		●	●				●			●	●		
海洋動力學	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		
氣候變遷		●	●	●	●		●	●	●		●	●	●	●	●			●	●	●	●	●		
地球科學與考古學		●	●	●		●	●	●		●	●		●	●	●	●	●	●				●		
近代宇宙學導論	●	●		●	●	●	●	●			●	●	●	●	●			●			●	●		
應變分析		●		●	●		●	●			●	●	●	●	●	●		●			●	●		
逆推理論	●	●		●			●				●	●	●	●				●			●	●		
高等地球物理學	●	●		●	●		●	●	●	●		●	●	●	●	●		●			●	●		
地質科學論文寫作		●		●	●		●	●			●	●	●	●	●			●				●		
顯微構造地質學		●		●	●		●	●			●	●	●	●	●		●	●			●	●		
現代天文技術	●	●		●	●		●	●	●	●	●		●	●	●		●	●			●	●		
高等地熱學	●	●		●			●				●	●	●	●				●			●	●		
高能天文物理學		●		●	●		●				●	●	●	●	●		●	●			●	●		
地震特論	●	●		●			●				●	●	●	●				●	●			●		
岩心—電測整合分析	●			●			●	●			●						●	●			●	●		
大氣科學研究方法	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
高等石油地質學							●	●	●	●														
高等海洋地質學							●	●	●	●														
斷層帶動力學	●	●						●			●					●					●			
季風動力特論		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		
數值方法在海洋之應用	●	●	●	●	●		●				●	●	●	●	●		●	●	●	●	●	●		
數值天氣預報特論		●	●			●		●	●		●	●	●	●	●	●		●				●		
地球物理流體力學		●		●	●		●	●	●		●	●	●	●	●	●		●	●			●		
岩石圈應力場		●		●	●	●	●	●			●	●	●	●	●		●	●				●		

能力指標 項目 選修課程	I 知識／認知						II 職能導向						III 個人特質					IV 價值／倫理				
	I-1	I-2	I-3	I-4	I-5	I-6	II-1	II-2	II-3	II-4	II-5	II-6	III-1	III-2	III-3	III-4	III-5	IV-1	IV-2	IV-3	IV-4	
	氣候與海洋變動	●	●		●	●						●		●	●	●						●
海洋環境教育			●	●	●	●	●	●		●												
海洋化學特論— 海洋二氧化碳與 全球變遷	●	●		●	●		●	●	●	●	●		●	●	●	●		●	●	●	●	●
海洋模式與資料 分析	●	●	●	●	●		●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
海洋資料同化數 值模式	●	●	●	●	●		●	●	●	●	●	●	●	●	●		●	●	●	●	●	●
古全球變遷—熱 帶太平洋之古海 洋變遷	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
海洋化學特論— 微量元素及同位 素的應用	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●