



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	國家公園地質專題			學年/學期 Academic Year/Semester	113/2
課程名稱(英文) Course Name in English	Special Topics in Geology of National Parks				
科目代碼 Course Code	NRESM0520	系級 Department & Year	碩士	開課單位 Course-Offering Department	自然資源與環境學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)		3.0/3.0	
授課教師 Instructor	/蔡金河				
先修課程 Prerequisite					
課程描述 Course Description					
This course presents a geological survey of minerals/rocks, landforms, structures, and hazards in Taiwan's national parks. Each park's geological evolution through time will be explained with emphasis on the role of plate tectonics and surface processes. Field trip(s) to some of the national parks will be arranged. Students must finish a short essay on topics related to geology of a national park (or "geo-park") by the end of the semester. Non-major students are welcome.					
課程目標 Course Objectives					
1. To develop geologic background, concepts, and principles through study of selected national parks in Taiwan. 2. To examine the geologic framework and history, ancient/modern geologic processes, and factors influencing the present day landscape for each park area. 3. To finish an essay of introducing the geology of a national park by reading the geological literature.					
圖示說明Illustration：● 高度相關 Highly correlated ○ 中度相關 Moderately correlated					
授課進度表 Teaching Schedule & Content					
週次Week	內容 Subject/Topics				備註Remarks
1	Introduction; Organization				
2	General overview of geology; why geology matters (I)				
3	General overview of geology; why geology matters (II)				
4	General introduction of geology of Taiwan (I)				
5	General introduction of geology of Taiwan (II)				
6	General introduction of geology of Taiwan (III)				
7	No class				
8	Geology of Taroko National Park (I)				
9	Geology of Taroko National Park (II)				
10	Geology of Yangmingshan National Park (I)				
11	Geology of Yangmingshan National Park (II)				
12	Geology of Kenting National Park (I)				

13	Geology of Kenting National Park (II)	
14	Introduction of Taiwan's Geoparks (I)	
15	Introduction of Taiwan's Geoparks (II)	
16	Student Presentation (I)	
17	Student Presentation (II)	
18	Field trip to one national park (exact date to be decided)	

教學策略 Teaching Strategies

- ☒ 課堂講授 Lecture
 ☒ 分組討論 Group Discussion
 ☒ 參觀實習 Field Trip
 ☐ 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

- ☐ 問題導向學習(PBL)
 ☐ 團體合作學習(TBL)
 ☐ 解決導向學習(SBL)
 ☐ 翻轉教室 Flipped Classroom
 ☐ 磨課師 Moocs

社會責任(Social Responsibility)

- ☐ 在地實踐 Community Practice
 ☐ 產學合作 Industry-Academia Cooperation

跨域合作(Transdisciplinary Projects)

- ☐ 跨界教學 Transdisciplinary Teaching
 ☐ 跨院系教學 Inter-collegiate Teaching

- ☐ 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments									
配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績(含出缺席) General Performance (Attendance Record)	20%		✓	✓					
期中考成績 Midterm Exam									
期末考成績 Final Exam	40%			✓	✓				
作業成績 Homework and/or Assignments	40%		✓	✓	✓		✓		
其他 Miscellaneous (_____)									
評量方式補充說明 Grading & Assessments Supplemental instructions									
教科書與參考書目(書名、作者、書局、代理商、說明) Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)									
Suggested readings Lillie, R. J. (2020) The Story Beneath the Scenery: Plate Tectonics and the Landscapes of Our National Parks, Wells Creek Publisher. Zalasiewicz, J, (2022) How to Read a Rock: Our planet's hidden stories. Smithsonian Books. Useful videos by UTD Geoscience: https://www.youtube.com/@UTDGeoscienceStudios A variety of geological papers will be assigned for reading and discussion.									
課程教材網址(含線上教學資訊,教師個人網址請列位於本校內之網址) Teaching Aids & Teacher's Website(Including online teaching information. Personal website can be listed here.) Some useful resources are listed in my research group's websites. http://faculty.ndhu.edu.tw/~pgml/resource.htm http://faculty.ndhu.edu.tw/~tsaich/PM-teaching									
其他補充說明 (Supplemental instructions)									