

國立中正大學課程大綱

115 學年 1 學期

課程名稱(中文)	地形學 (geomorphology)
先修科目或先備能力	
課程概述	Geomorphology is the study of Earth's surface landforms and the physical processes that shape them across geologic timescales (from hundreds to millions of years, 10^2 to 10^6 years). This course investigates a wide range of landforms and geomorphic processes, with a particular emphasis on examples from Taiwan. Alongside lectures, laboratory exercises will focus on developing practical skills, including interpreting aerial photographs, analyzing topographic maps, and applying quantitative methods to address geologic problems. The course also includes a two-day field trip to observe and analyze landscapes and processes discussed in class.
學習目標	students will be able to: 1. describe the cycles of mass and energy transfer that drive erosion and deposition processes. 2. identify landforms, describe their composition, and explain the surface processes responsible for their formation. 3. express the principles of landscape evolution within the framework of geologic time.
教科書	Key Concepts in Geomorphology, 1st Ed., 2014, Bierman, Paul, and David Montgomery, W. H. Freeman Process Geomorphology, 5th Ed., 2011, Ritter, Dale F., R. Craig Kochel, and Jerry R. Miller, Waveland Pr Inc. (請尊重智慧財產權，不得非法影印教師指定之教科書籍)

教學要點概述

教材編選	☒ 自編教材 ☐ 教科書作者提供
教學方法	☒ 投影片講述 ☐ 板書講述
評量方法	☒ 上課點名 10% ☒ 小考 5% ☒ 作業 40% ☐ 程式實作 0% ☐ 實習報告 0% ☐ 專案 0% ☐ 期中考 0% ☒ 期末考 15% ☒ 野外報告 30% ☐ 其它 0%
教學資源	☐ 課程網站 ☒ 教材電子檔供下載 ☐ 實習網站

教學相關配合事項	Student must attend a two-day field trip (Cost: about 2000 NTD at student's own expense).
課程進度	
第一週：Introduction/Conceptual framework	
第二週：Weathering and soils	
第三週：Mass movement and hillslopes	
第四週：Mass movement and hillslopes	
第五週：Drainage basin development, morphometry, and hydrology	
第六週：Fluvial processes and landforms	
第七週：Fluvial processes and landforms	
第八週：Tectonic geomorphology	
第九週：Tectonic geomorphology	
第十週：Coastal processes and landforms	
第十一週：Field trip	
第十二週：Field trip	
第十三週：Field trip	
第十四週：Field trip	
第十五週：Field trip	
第十六週：Final exam	
第十七週：	
第十八週：	
核心能力	
Enhance basic sense, knowledge, and professional expertise. Become proficient in techniques for investigating or monitoring the natural environment. Effectively utilize scientific analysis tools and data integration software.	