

國立中正大學課程大綱

114 學年 2 學期

課程名稱(中文)	構造地形 (Tectonic Geomorphology) (in English Master Program 3 credits)
先修科目或先備能力	
課程概述	This course aims at introducing how landscape features can be used for interpreting tectonic patterns and rates. For this purpose, the complex interaction between tectonics and earth surface processes under specific climatic conditions will be emphasized. This class has three components: 1. Lectures, 2. Computer Practicals to learn DEM analysis, 3. Field Excursion to learn methods directly
學習目標	Students should be able to: 1. Describe what tectonic geomorphology is. 2. Explain links between tectonic geomorphology and climate change with respect to time-scale considered. 3. Define what a geomorphic marker is and describe what characteristics make for a good geomorphic marker. 4. Derive uplift rates from marine terraces. 5. Explain how river terraces form and how they can be used in tectonic studies.
教科書	Tectonic Geomorphology, 2nd Ed., 2011, D. W. Burbank and R. S. Anderson, John Wiley & Sons. (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 (Provided by the instructor) □教科書作者提供
教學方法	■投影片講述 (Instruction with PPT) □板書講述 ■野外實習 (Field trip)
評量方法	■上課點名 (Attendance) 20% □小考 0% ■作業 (Assignments) 40% □程式實作 0% □實習報告 0% □專案 0% □期中考 0% □期 末 考 0% ■野外報告 (Field report) 40% □其它 0%
教學資源	□課程網站 ■教材電子檔供下載 (download from given links) □實習網站
教學相關配合事項	Must attend a three days field trip (Cost: about 3500 NTD at student's own expense).

課程進度

- 第一週：Introduction and geomorphic markers
- 第二週：Geomorphic mapping
- 第三週：Geomorphic mapping
- 第四週：Dating methods and pre-field presentation
- 第五週：Bedrock rivers
- 第六週：Channel analysis
- 第七週：Transient river response
- 第八週：Landscape evolution model
- 第九週：Field trip
- 第十週：Field trip
- 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 presentation
- 第十七週：
- 第十八週：

核心能力

Basic sense, knowledge, and comprehension in landscape formation governed by tectonics (geological) and earth-surface (geomorphic) processes.