朝陽科技大學 091學年度第2學期教學大綱
Soil Mechanics in Engineering Practice 應用土壤力學

當期課號	1098	Course Number	1098
授課教師	徐松圻	Instructor	HSU,SUNG CHI
中文課名	應用土壤力學	Course Name	Soil Mechanics in Engineering Practice
開課單位	營建工程系(四日)四A	Department	
修習別	選修	Required/Elective	Elective
學分數	3	Credits	3
課程目標	學生修完此課程對土壤力學之理論能更實務用；主要內容包括：1. 土壤力學理論之應用介紹. 2. 難以處理土壤上之基礎. 3.土壤改良的技術. 4. 加勁土擋土牆. 5. 土壤力學應用案例之探討	Objectives	The objective of this course is to teach the students the engineering practices of soil mechnacis. The outlines of this course are: Introduction of the application of soil mechanics. Problems of foundation in difficult soils. New techniques of soil improvement. Stability analysis of reinforced retaining wall. Case studies on the application of soil mechanics.
教材	每週授課三小時，配合照片與影片以及學生選擇校外參觀工地及討論來學習。	Teaching Materials	There are 3 class hours per week. Homework or reading assignments will be assigned every week. Students are required to watch video tapes visit the in situ construction sites.
成績評量方式	作業報告與出席 15%；小考 35%；期中考 25%；期末考 25%	Grading	Homework, Report & Attendence 15% Quizs 35% Midterm 25% Final Exam 25%
教師網頁			
教學內容	介紹大地工程有關深開挖理論與設計、深開挖之支撐計算及沉陷、開挖降水作業、版樁牆之理論、版樁牆之支撐計算與設計、土石壩及滲流、加勁擋土牆、土壤改良、連續壁、台灣卵礫石層之工程特性等，讓學生有獨立設計相關大地工程施工之能力。	Syllabus	This is a second design course following the foundation engineering for geotechnical engineering. Students will be able to design the support of deep excavation. The course will cover earth pressure, design of bulkhead and anchored bulkhead, theory and monitoring system for deep excavation, design and support of deep excavation, pumping and water lowering for deep excavation, design and calculation of pumping well, settlement and influence range of pumping during excavation, Darcy's law and permeability, seepage, flow nets in layered materials and dam, finite difference method and flow nets, reinforced earth structures, soil improvement and ground modification, characteristics of gravel formations in Taiwan, excavation, support, and anchoring in gravel formation.

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